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Addendum to Environmental Impact Report

Addendum Date: February 29, 2012
Case No.: 2007.0347E
Project Title: San Francisco Bicycle Plan Project 5-5
Cesar Chavez Street from Kansas Street to Mississippi Street
Original EIR: SCL No. 2008032052, certified August 4, 2009
Project Sponsor: San Francisco Municipal Transportation Agency
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REFERENCE BOOK
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San Francisco General Plan in connection with the San Francisco Bicycle Plan; adopted environmental findings and findings that the General Plan amendment is consistent with the General Plan and eight priority policies of Planning Code Section 101.1; as well as authorized other acts in connection thereto.

Since the adopting of the FEIR and approval of the Plan, SFMTA staff has revised the design of the project. This addendum addresses the environmental review of the revised design.

SFMTA staff facilitated two community meetings to present and receive feedback on the revised design:

The first meeting occurred on June 6, 2011 at the Good Samaritan Family Resource Center at 1294 Potrero Avenue, where staff explained the reason for the delay in implementation, which had been scheduled for June 2011. Key points of the presentation were that traffic would be

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Lead Agency: San Francisco Planning Department
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REMARKS

Background

The project sponsor, the San Francisco Municipal Transportation Agency (SFMTA), proposes to implement the Cesar Chavez Street East Bicycle Lane Project. This project would install bicycle lanes along Cesar Chavez Street from Kansas Street (near the US 101 interchange) to Mississippi Street (near the I-280 ramps).

This project was included as "Project 5-5" in the San Francisco Bicycle Plan Final Environmental Impact Report (FEIR, case No. 2007.0347E). The San Francisco Planning Commission certified the Bicycle Plan FEIR on June 25, 2009. On June 26, 2009, the SFMTA Board approved 45 of the 60 near-term Bicycle Plan projects, including Project 5-5.

The motion to certify the FEIR was appealed to the Board of Supervisors. On August 4, 2009 the Board of Supervisors reaffirmed the Planning Commission's certification of the FEIR. Subsequently, the Board of Supervisors passed an Ordinance adopting the 2009 San Francisco Bicycle Plan, which also amended the San Francisco General Plan in connection with the San Francisco Bicycle Plan; adopted environmental findings and findings that the General Plan amendment is consistent with the General Plan and eight priority policies of Planning Code Section 101.1; as well as authorized other acts in connection thereto.

Since the adopting of the FEIR and approval of the Plan, SFMTA staff has revised the design of the project. This addendum addresses the environmental review of the revised design.

SFMTA staff facilitated two community meetings to present and receive feedback on the revised design:

- The first meeting occurred on June 6, 2011 at the Good Samaritan Family Resource Center at 1294 Potrero Avenue, where staff explained the reason for the delay in implementation, which had been scheduled for June 2011. Key points of the presentation were that traffic would be substantially delayed with the current proposal, and that SFMTA would explore parking removal and other options at Evans Avenue to provide a better facility for bikes, cars, and trucks.

- The second meeting occurred on August 24, 2011, again at the Good Samaritan Family Resource Center at 1294 Potrero Avenue, where staff presented the Modified Project as described below.

Existing Conditions

Cesar Chavez Street is described in the Bicycle Plan FEIR (p. V.A.3, 128 and 129) as follows:

Roadways: Cesar Chavez Street is a major arterial with four travel lanes between the I-280 and US 101 freeways. This section of Cesar Chavez Street is part of the MTS Roadway Network and the CMP Network. Traffic volumes are generally high near the US 101 ramps during the AM and PM peak period.

Transit: Muni bus line 19 runs in both directions on Cesar Chavez Street for one block between Evans Avenue and Connecticut Street, with approximately six buses per hour each way during the AM and PM peak periods.

Parking: On-street parking is generally permitted on both sides of the street, and parking occupancy is moderate to high.

Pedestrian: Pedestrian volumes in this segment are generally low and sidewalks are generally available on both sides of Cesar Chavez Street.

Bicycle: Bicycle volumes are generally low in this area. Cesar Chavez is designated as existing Bicycle Route 60 with a Class II bicycle lane from I-280 west to the Caltrain tracks, Class III bicycle route from the Caltrain tracks west to Kansas Street, and Class III bicycle route with wide curb lanes from Kansas Street to US 101. There is also a Class I bicycle path eastbound between Hampshire Street and Bayshore Boulevard under US 101 and westbound between the northbound US 101 freeway on-ramp and Potrero Avenue. Existing Bicycle Route 60 connects with existing Bicycle Route 68 at Evans Avenue, existing Bicycle Route 525 (Class III with wide curb lanes) at Vermont Street, and existing Bicycle Route 25 (Class I/III) at Bayshore Boulevard. Street grades along Project 5-5 are relatively flat with slopes less than five percent.

Loading: This section has mostly industrial use and most of the buildings have off-street parking lots or loading areas. There are no on-street yellow commercial freight loading spaces on this segment of Cesar Chavez Street. Most of the loading activities occur in the off-street areas or side streets, although infrequent loading activities were observed utilizing on-street parking spaces.

Traffic: Two study intersections were analyzed for Level of Service (LOS) in the FEIR analysis of Project 5-5. LOS is a qualitative description of the performance of an intersection based on the average delay per vehicle. Intersection levels of service range from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays. In San Francisco, LOS A through D are considered

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satisfactory service levels and LOS E and F conditions are considered unsatisfactory service levels.

Evans Avenue/Cesar Chavez Street: This T-intersection is signalized. Parking is restricted on both sides of Cesar Chavez Street to provide both a westbound left-turn-only lane and an eastbound right-turn-only lane onto Evans Avenue, in addition to two through lanes in both directions. Evans Avenue has two northbound lanes, the leftmost which turns left onto Cesar Chavez Street, and the rightmost which turns either left or right onto Cesar Chavez Street. There are no bicycle lanes at this intersection, but sharrows are installed along Evans Avenue. As reported in the FEIR, during the weekday PM peak hour, the Evans Avenue/Cesar Chavez Street intersection operates at an acceptable LOS D.

Pennsylvania Avenue/Cesar Chavez Street/I-280 Off-Ramp: This intersection is signalized. Eastbound and westbound Cesar Chavez Street have two through lanes, as well as an eastbound left-turn lane and westbound right-turn lane onto northbound Pennsylvania Avenue. Southbound Pennsylvania Avenue has two lanes, one turning left and one turning right onto Cesar Chavez Street. The northbound I-280 off-ramp forms the northern approach of the intersection and has three lanes: one turns left, one proceeds straight, and one turns right. There is a westbound bicycle path and an eastbound bicycle lane at the intersection. During the weekday PM peak hour, the Pennsylvania Avenue/Cesar Chavez Street/I-280 Off-Ramp intersection operates at an acceptable LOS C.

Original Project Description

Two "options" (alternatives) for Project 5-5 were studied in the San Francisco Bicycle Plan FEIR. See **Appendix A1** for graphics depicting the original design.

Option 1 would have removed a travel lane in either the eastbound or westbound direction, but not removed parking; subsequently, a lane removal in the eastbound direction was selected and carried forward in the FEIR for analysis. This eastbound lane removal was included in the analysis of the two study intersections (Cesar Chavez Street/Evans Avenue and Cesar Chavez Street/Pennsylvania Avenue).

Option 2 would have removed parking along the north side of the street, but not removed a travel lane, and therefore did not result in any modifications to intersection geometries at the two study intersections.

Option 1 was ultimately selected by the SFMTA Board on June 26, 2009.

Proposed Revisions to Project

Subsequent to the certification of the FEIR, the proposed project design has been revised by SFMTA. The revised project differs from that analyzed in the FEIR. See **Appendix A2** for graphics depicting the revised design.

The new project would remove all on-street parking on both the north and south sides of the street, while maintaining four travel lanes along the length of Cesar Chavez Street. As described below, the new design would also result in a westbound lane removal at two intersections, Cesar Chavez Street/Evans

Avenue and Cesar Chavez Street/Connecticut Street. There would also be an eastbound lane removal at the intersection of Cesar Chavez Street/Vermont Street. There would be no lane removal in either direction at the intersection of Cesar Chavez Street/Pennsylvania Avenue, or at the other intersections along the corridor.

The rationale for the modifications is to provide for greater lateral separation between bicycle and auto traffic through wider lanes and a striped buffer zone, and also to remove door zone hazards.[1] The original designs (both Option 1 and Option 2) would have installed bike lanes that were 5′ to 6′ wide, located between a 10′ wide auto travel lane and an 8′ wide parking lane. The revised design would allow for an 8′6″ wide bike lane (5′ bike lane and 3′6″ painted buffer) between an 11′ auto travel lane and the curb. By providing more space between bicycle and vehicular traffic, this revised design would enhance safety, particularly considering the high volume of trucks on this street. Elimination of door zone hazards would also enhance bicycle safety.

Due to the necessity of providing eastbound and westbound turn lanes at the T-intersection of Cesar Chavez Street/Evans Avenue, the revised design would remove a westbound through lane at this intersection. This is different from the Option 1 design, which would have removed an eastbound travel lane at this intersection. Under the revised design, the westbound approach would have two lanes, and at Evans Avenue, the left lane would become a left-turn-only lane while the right lane would remain as a through lane. The two-lane Evans Avenue northbound approach would be modified, from a left-turn-only lane and shared left-right lane, into a left-turn-only lane and a right-turn-only lane. The eastbound approach would remain as currently configured, with two through-lanes and one right-turn-only lane. Eastbound and westbound bicycle lanes would be installed through the intersection, while sharrows would remain on Evans Avenue.

The intersection of Cesar Chavez Street/Connecticut Street would be modified under the revised design. (This intersection was not included the FEIR analysis, but is included in this addendum.) In order to align with the downstream intersection at Evans Avenue, the westbound approach would be reduced from three lanes to two. There would be no change to the eastbound or southbound approach. Eastbound and westbound bicycle lanes would be provided through the intersection.

The segment of Cesar Chavez Street between the US 101 interchange and Kansas Street, centered on the intersection with Vermont Street, would be modified under the revised design. (The Cesar Chavez Street/Vermont Street intersection was not included the FEIR analysis, but is included in this addendum.) Eastbound and westbound bicycle lanes would be provided through the segment. The eastbound approach from eastbound Cesar Chavez Street would be reduced from two through lanes to one through lane, consistent with the design for a separate but adjacent project to the west, the Cesar Chavez Streetscape Design.[2] The eastbound approach from the southbound US 101 offramp/northbound

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[1] The "door zone hazard" refers to car doors on the driver's side of the car that project into the bike lane when opened. If a driver exiting a vehicle suddenly opens his or her car door into the path of an oncoming bicyclist, the cyclist may have to suddenly decelerate, swerve into the auto travel lane, or crash into the door. Removal of on-street parking eliminates the door zone hazard.

Bayshore Boulevard would be modified from a YIELD approach, to continuing uncontrolled into the second lane on eastbound Cesar Chavez Street. The westbound segment between Kansas Street and the northbound US 101 onramp would be reconfigured to separate the right-turn lane from the through lane downstream of Kansas Street (with the new bicycle lane in between the two auto lanes), but the number of westbound lanes would remain at two. These modifications would not require the removal of any parking, because parking is already prohibited along the north and south sides of this segment of Cesar Chavez Street, and the existing auto lanes are overly wide. There would be no modifications to the intersection geometry at Cesar Chavez Street/Kansas Street.

The westbound segment between Pennsylvania Avenue and Mississippi Street (which currently has no bicycle facility) would have a bicycle lane installed. This modification would not require the removal of a travel lane or parking on this segment, because the existing westbound auto travel lanes are overly wide. The existing eastbound bicycle path in this segment would remain.

The revised project would not modify the intersection geometries along Cesar Chavez Street at Pennsylvania Avenue, Mississippi Street, Missouri Street, or Kansas Street.

Analysis of Potential Environmental Effects

San Francisco Administrative Code Section 31.19(c)(1) states that a modified project must be reevaluated and that "If, on the basis of such reevaluation, the Environmental Review Officer determines, based on the requirements of CEQA, that no additional environmental review is necessary, this determination and the reasons therefore shall be noted in writing in the case record, and no further evaluation shall be required by this Chapter."

CEQA Guidelines Section 15164 provides for the use of an addendum to document the basis of a lead agency's decision not to require a Subsequent or Supplemental FEIR for a project that is already adequately covered in an existing certified FEIR. The lead agency's decision to use an addendum must be supported by substantial evidence that the conditions that would trigger the preparation of a Subsequent FEIR, as provided in CEQA Guidelines Section 15162, are not present.

The Initial Study and the FEIR for the Bicycle Plan evaluated the potential impacts of construction and operation of Project 5-5's two options and found that Option 1 would result in project-specific and cumulative significant and unavoidable operational impacts to traffic at the intersection of Evans Avenue/Cesar Chavez Street, and that no feasible mitigation measures were identified (p. V.A.3, 516 and 517). All other Project 5-5 impacts were determined to be less than significant as part of the overall Bicycle Plan program.

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[2] The Cesar Chavez Streetscape Design project refers to Project 5-6 of the *San Francisco Bicycle Plan*, which removed travel lanes and installed bicycle lanes and a planted median along Cesar Chavez Street from Guerrero Street to Hampshire Street, and is under construction as of February 2012. For more information, see *Addendum to Environmental Impact Report: San Francisco Bicycle Plan Project 5-6*, Case No. 2007.0347E, San Francisco Planning Department, October 20, 2010

Since certification of the FEIR, no changes have occurred in the circumstances under which the original Project 5-5 options or the project as currently proposed would be implemented, that would change the severity of the project's physical impacts as explained herein, and no new information has emerged that would materially change the analyses or conclusions set forth in the FEIR.

Further, proposed modifications and design refinements to Project 5-5, as demonstrated below, would not result in any new significant environmental impacts, substantial increases in the significance of previously identified effects, or necessitate implementation of additional or considerably different mitigation measures than those identified in the FEIR. The effects of the Modified Project would be substantially the same as those reported for Project 5-5 in the Bicycle Plan FEIR. The following discussion provides the basis for this conclusion.

Transportation

Traffic

An intersection Level of Service (LOS) analysis was prepared for the Modified Project design and is summarized below. See **Appendix B** of this document for detailed Level of Service calculations.

Existing, Existing plus Project, 2030 Cumulative, and 2030 Cumulative plus Project scenarios for both Options 1 and 2 as well as the Modified Project are presented in **Tables 1** and **2** on the following pages. The analysis from the Bicycle Plan FEIR and the new analysis presented in this Addendum combined present existing and cumulative conditions for all intersections along the project corridor where auto lane configurations would be modified under the Modified Project. The combined analyses are presented in order to demonstrate that the Modified Project would not result in significant traffic impacts that were not previously identified in the Bicycle Plan FEIR.

Vermont Street/Cesar Chavez Street: This intersection was not analyzed in the FEIR. The Modified Project entails an eastbound-through movement lane reduction, from two lanes to one, as described above.

PM peak period traffic counts were counted on January 4, 2011. Intersection volumes under Year 2030 Baseline Conditions were developed based on the combination of future traffic volumes reported in the November 2009 *Candlestick Point Hunters Point Shipyard Phase II FEIR*, and traffic growth projected by the San Francisco County Transportation Authority's Chain Activity Modeling Process (SF CHAMP) Model.[3]

As shown in **Table 1**, for both Existing and Existing plus Modified Project conditions, the intersection would operate acceptably at LOS C; therefore the Modified Project would not create a significant impact at this intersection.

As shown in **Table 2**, for both Cumulative and Cumulative plus Modified Project conditions, the intersection would operate unacceptably at LOS F. The failing movement is the southbound, STOP-controlled movement. The eastbound lane reduction as proposed under the Modified Project would not cause conditions to deteriorate, because the predominant southbound movement (the southbound-right turn) would not be impacted by the reduction in eastbound capacity. Therefore the Modified Project would not contribute considerably to cumulative effects at this intersection.

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[3] Traffic counts and cumulative volumes were developed for the Potrero HOPE Transportation Study, case 2011.0627!

Evans Avenue/Cesar Chavez Street: This intersection was analyzed in the FEIR. The Modified Project entails a westbound lane reduction, as described above, which is different from the eastbound lane reduction proposed in Option 1 in the FEIR. The Modified Project configuration results in better traffic operation than Option 1 design. This is because, given the signal phasing of this T-intersection, a westbound lane reduction creates a lower overall reduction in capacity than an eastbound lane reduction.

The Existing and Existing plus Project Conditions analyses were obtained from the Bicycle Plan FEIR.[4] Cumulative traffic volumes were also obtained from the FEIR, except they were factored upward from year 2025 to year 2030, assuming a traffic growth rate of 0.5% per year.

As shown in Table 1, for both Existing and Existing plus Modified Project conditions, the intersection would operate acceptably at LOS D (compared to LOS F for Option 1); therefore the Modified Project would not create a significant project impact at this intersection.

As shown in Table 2, for both Cumulative and Cumulative plus Modified Project conditions, the intersection would operate unacceptably at LOS F. The volume/capacity ratio would deteriorate from 1.365 to 1.645; however the deterioration would be less severe than under Option 1 (which has a volume/capacity ration of 1.832). Therefore the Modified Project would not contribute considerably to cumulative effects that were not already accounted for in the Bicycle Plan FEIR.

Connecticut Street/Cesar Chavez Street: This intersection was not analyzed in the FEIR. The Modified Project entails a westbound-through movement lane reduction, from three lanes to two, as described above.

PM peak period traffic counts were counted on January 4, 2011. Intersection volumes under Year 2030 Baseline Conditions were developed based on the combination of future traffic volumes reported in the November 2009 *Candlestick Point Hunters Point Shipyard Phase II FEIR*, and traffic growths projected by the San Francisco County Transportation Authority's Chain Activity Modeling Process (SF CHAMP) Model.[5]

As shown in Table 1, for both Existing and Existing plus Modified Project conditions, the intersection would operate acceptably at LOS B. Therefore the Modified Project would not create a significant project impact at this intersection.

As shown in Table 2, for both Cumulative and Cumulative plus Modified Project conditions, the intersection would operate acceptably at LOS D. Therefore the Modified Project would not create a significant cumulative impact at this intersection.

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[4] New peak hour traffic counts were collected at this intersection on August 18, 2011, which indicated lower PM peak hour traffic volumes than were counted in 2008 for the Bicycle Plan FEIR. To present a more conservative analysis, the older (higher) traffic counts are analyzed in this addendum, rather than the newer (lower) traffic counts.

[5] Traffic counts and cumulative volumes were developed for the Potrero HOPE Transportation Study, case 2011.0627

Pennsylvania Avenue/Cesar Chavez Street: At this intersection, the Modified Project entails the same lane configuration as under Existing Conditions (and also the same as Option 2).

The Existing and Existing plus Project Conditions analyses were obtained from the Bicycle Plan FEIR. Cumulative traffic volumes were also obtained from the FEIR, except they were factored upward from year 2025 to year 2030, assuming a steady traffic growth rate of 0.5% per year.

As shown in **Table 1**, for both Existing and Existing plus Modified Project conditions, the intersection would operate acceptably at LOS C; therefore the Modified Project would not create a significant project impact at this intersection.

As shown in **Table 2**, for both Cumulative and Cumulative plus Modified Project conditions, the intersection would operate at the same unacceptable rating of LOS E. Because the Modified Project would not cause conditions to deteriorate beyond what is already projected for Cumulative Conditions, it would not create a significant cumulative impact at this intersection.

TABLE 1
INTERSECTION LEVEL OF SERVICE AND AVERAGE DELAY
EXISTING CONDITIONS (WEEKDAY PM PEAK HOUR)

	Existing		Project Option 1		Project Option 2		Modified Project	
Intersection	Average Delay[a]	LOS	Average Delay[a]	LOS	Average Delay[a]	LOS	Average Delay[a]	LOS
1. Vermont St/ Cesar Chavez St	24.8	C	--	--	--	--	25.7	C
2. Evans St/ Cesar Chavez St	47.4	D	>80 1.179	F	47.4	D	50.7	D
3. Connecticut St/ Cesar Chavez St	11.4	B	--	--	--	--	12.1	B
4. Pennsylvania Ave/ Cesar Chavez St	31.9	C	33.6	C	31.9	C	31.9	C

Sources: San Francisco Planning Department 2012.

Notes:

a. Delay in seconds per vehicle. At signalized intersections where LOS F is reported, the critical movement volume-to-capacity ratio is also reported.

TABLE 2
INTERSECTION LEVEL OF SERVICE AND AVERAGE DELAY
2030 CUMULATIVE CONDITIONS (WEEKDAY PM PEAK HOUR)

	Cumulative		Cumulative + Project Option 1		Cumulative + Project Option 2		Cumulative + Modified Project	
Intersection	Average Delay[a]	LOS	Average Delay[a]	LOS	Average Delay[a]	LOS	Average Delay[a]	LOS
1. Vermont St/ Cesar Chavez St	>50	F	--	--	--	--	>50	F
2. Evans St/ Cesar Chavez St	>80 1.365	F	>80 1.832	F	>80 1.365	F	>80 1.645	F
3. Connecticut St/ Cesar Chavez St	49.3	D	--	--	--	--	51.2	D
4. Pennsylvania Ave/ Cesar Chavez St	73.3	E	69.7	E	73.3	E	77.3	E

Sources: San Francisco Planning Department 2012.

Notes:

a. Delay in seconds per vehicle. At signalized intersections where LOS F is reported, the critical movement volume-to-capacity ratio is also reported.

At all other intersections along the corridor (Cesar Chavez Street at Kansas, Missouri, and Mississippi streets), the Modified Project would not alter the existing lane configurations, and would maintain two travel lanes in both directions. The Modified Project would therefore not affect intersection operations at these locations.

In conclusion, the Modified Project would not result in a substantial increase in the significance of the average delay or service degradation at study intersections or other intersections along the project corridor; nor would the Modified Project contribute considerably to cumulative effects that were not already accounted for in the certified Bicycle Plan FEIR. Overall, the Modified Project's traffic impacts, similar to the findings reached in the FEIR, would be "potentially significant and unavoidable" as presented on Matrix 1.2, Summary of Project Level Impacts, on FEIR pg. V.A.3-631.

Transit

The Modified Project would not result in any substantial increase in delay to transit vehicles beyond what was identified in the Bicycle Plan FEIR. The Bicycle Plan identified less-than-significant impacts to the 19 Polk Muni bus route for both Options 1 and 2.

Under the Modified Project, there would be no change in delay for the eastbound or westbound direction of the 19 Polk Muni bus route. This is because the movements that the bus takes through the study intersections would not be reconfigured under the Modified Project. Specifically, at both the intersection of Cesar Chavez Street/Evans Avenue and Cesar Chavez Street/Connecticut Street, the only modifications would be lane reductions for the westbound-through movements; the inbound and outbound bus routes do not travel on these movements.

Therefore, similar to the conclusion reached in the FEIR (p. V.A.3-454), the Modified Project would have a less-than-significant impact on transit

Pedestrians

The Modified Project would not result in an alteration of the existing sidewalk widths on either side of the Cesar Chavez Street alignment. Similar to the findings in the FEIR, pedestrian impacts would be less than significant with implementation of the Modified Project.

Bicycle

The Modified Project would include buffered bicycle lanes in both the eastbound and westbound directions on Cesar Chavez Street, and would remove door zone hazards associated with parked vehicles. Similar to Option 1 and Option 2 in the FEIR, the Modified Project could have a beneficial effect of improving roadway conditions and safety for bicyclists. Similar to the conclusions reached in the FEIR for Options 1 and 2, the Modified Project would not adversely affect bicycle operations in the project vicinity.

Parking

The Modified Project would result in the removal of all on-street parking along this segment of Cesar Chavez Street, which totals approximately 117 parking spaces. This would be a larger reduction in on-street parking supply than Option 1 (which would have removed parking only along the north side of the street, for a total reduction of approximately 94 parking spaces) or Option 2 (which would not have removed any parking spaces along the street).

Consistent with the findings reported in the FEIR, implementation of the Modified Project would increase parking occupancy (e.g., decrease supply) in the area. San Francisco does not consider parking supply as part of the permanent physical environment. Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact (CEQA Guidelines § 15131(a).). The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service in particular, would be in keeping with the City's "Transit First" policy. The City's Transit First Policy, established in the City's Charter Section 8A.115 provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of the Modified Project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

Loading

As described in the FEIR, the project area consists of predominantly industrial uses, and no on-street loading spaces are present along this segment of Cesar Chavez Street. Occasional double-parking by delivery vehicles in the curbside travel lane may occur, but typically on-street loading demand is low. The removal of all parking along Cesar Chavez Street would not result in the removal of any on-street loading spaces. Therefore, similar to the conclusion reached in the FEIR, there would be less-than-significant loading impacts associated with implementation of the Modified Project.

FEIR Mitigation Measures

The FEIR identified that there were no feasible mitigation measures for Project 5-5's significant transportation impacts, specifically, impacts to the Cesar Chavez Street/Evans Avenue intersection. Similarly, with implementation of the Modified Project, no feasible mitigations measures exist that would improve operations at this intersection.

In summary, the significance of impacts as indicated for traffic, transit, pedestrians, bicyclists, and loading would generally be the same with the Modified Project as for Project Options 1 and 2 reported in the certified FEIR, despite the rejection of certain mitigation measures as infeasible in the FEIR.

Aesthetics

The Modified Project would result in physical changes within the street right-of-way along the project corridor as described in this Addendum's Project Description and in the FEIR. Similar to Options 1 and 2, these physical changes that may have an effect on the visual setting and aesthetic character of the area include removal of on-street parking, establishment of new bicycle lanes, changes to lane widths, and the addition of associated signage.

Similar to the findings in the FEIR for Project 5-5, the visual character of the street would not substantially change with implementation of the Modified Project. Therefore, there would be no significant adverse impacts related to visual character.

Air Quality

The Bicycle Plan FEIR (p. V.B, 22) found that:

> Implementation of the Proposed Project would not result in any new traffic volumes being added to the roadway network; therefore, there would be no change in the intersection volume under project conditions. Hence, intersection volumes stay constant between Existing and Existing plus Project Conditions. Similarly, there is no change in intersection volumes between Cumulative and Cumulative plus Project Conditions. However, the reduction of travel lanes at major intersections would increase traffic congestion at some intersections... under Cumulative Plus Project conditions, CO [carbon monoxide] would not exceed the ambient air quality standard and TAC [toxic air contaminants] emissions would be less than existing at all intersections. Therefore implementation and operation of the project would not result in significant adverse air quality impacts.
>
> Bicycling has no associated emissions and the Proposed Project can reasonably be expected to reduce emissions citywide by shifting a portion of motor vehicle trips to bicycle trips. The Proposed Project could contribute to a new reduction in emissions and thus would have no impact and would not contribute to a cumulative impact... implementation of the Proposed Project does not result in any new automobile trips being added to the roadway network. Under cumulative conditions, with the Proposed Project included, CO and TAC emissions are predicted to decrease.

As illustrated in **Tables 1 and 2**, the Modified Project would generally be consistent in terms of average intersection delays at the FEIR study intersections compared to the delays reported for Project 5-5, Options 1 and 2 in the FEIR. Given the similarity in delays expected under Modified Project, the conclusions reached for the Bicycle Plan Program and Cumulative Conditions in the FEIR would be substantially the same as those for the Modified Project. No new or substantially greater air quality impacts would occur.

Other Issues

The Initial Study for the Bicycle Plan program determined that for the following topics, any environmental effects associated with the Program and its individual projects would either be insignificant or would be reduced to a less-than-significant level by implementation of the mitigation measures included as part of the program: land use, population and housing, noise, air quality, cultural resources, recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, hazards and hazardous materials, mineral and energy resources, and agricultural resources. The FEIR did not discuss these issues further. The Initial Study, including the significance conclusions reached therein, remains applicable to the Modified Project and all mitigation and improvement measures from the Initial Study and the FEIR would be applied to the Modified Project, as appropriate, unless rejected as infeasible as previously described.

CONCLUSION

Based on the foregoing, it is concluded that the analyses conducted and the conclusions reached in the FEIR certified on August 4, 2009 remain valid. The proposed revisions to the project would not cause new significant impacts not identified in the FEIR, or result in a substantial increase in the severity of previously identified significant impacts, and no new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to circumstances surrounding the proposed project that would cause significant environmental impacts to which the project would contribute considerably, and no new information has become available that shows that the project would cause significant environmental impacts. Therefore, no supplemental environmental review is required beyond this addendum.

Date of Determination:

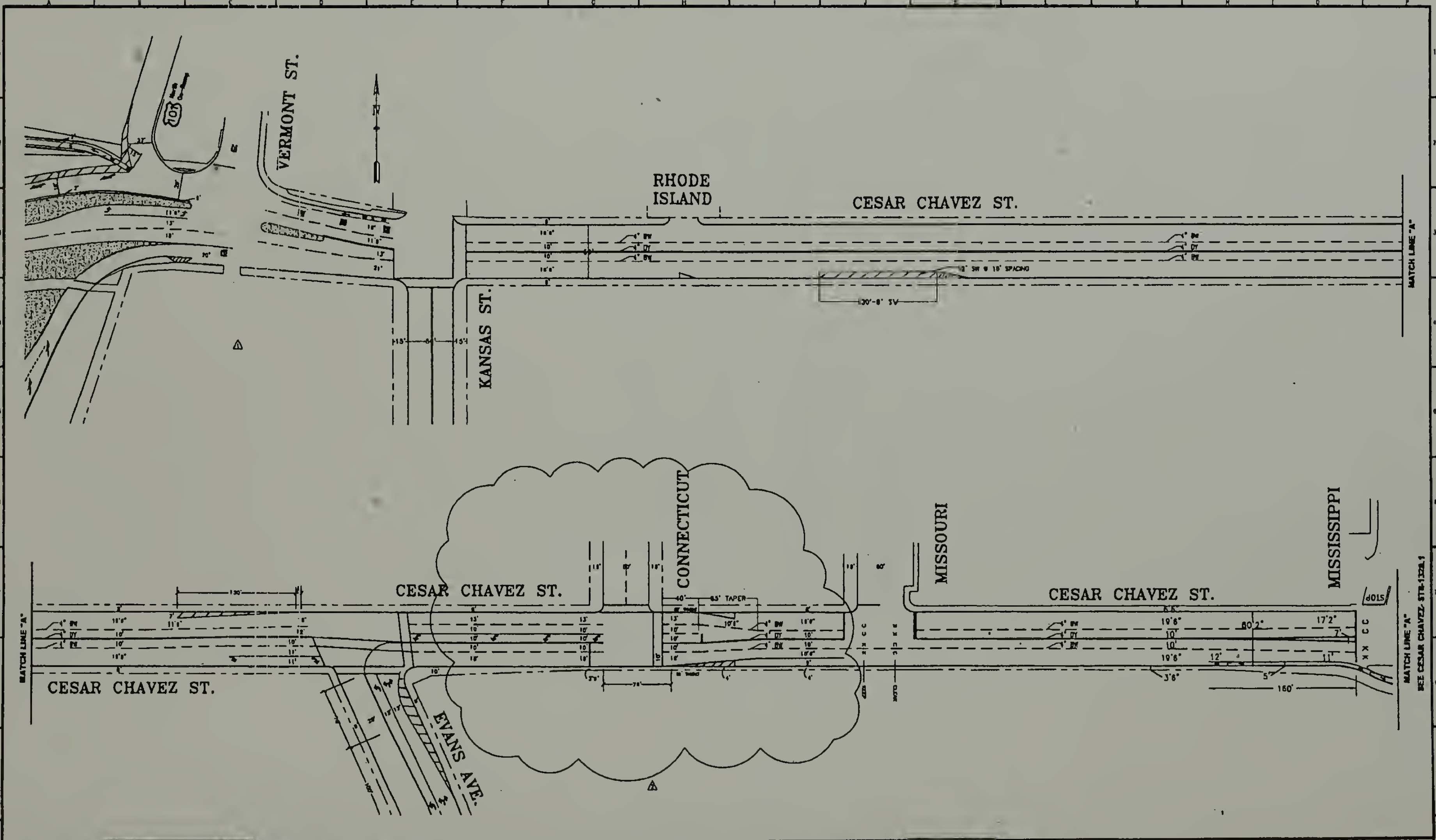
march 1, 2012

I do hereby certify that the above determination has been made pursuant to State and Local requirements.

BILL WYCKO
Environmental Review Officer

Appendix A1:

Existing Conditions Striping



NO.	DATE	DESCRIPTION	BY	APP.
2	02/17/06	LANE RECHANNELIZATION FROM MISSOURI TO CONNECTICUT	TA	[illegible]
1	04/21/04	CHANGED STRIPING FROM KANSAS TO [illegible]	TA	AKW

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

DEPARTMENT OF PARKING AND TRAFFIC
DIVISION OF TRAFFIC ENGINEERING
CITY AND COUNTY OF SAN FRANCISCO

DESIGNED: SB	DATE: 06/04
DRAWN: TA	DATE: 06/04
CHECKED: AKW	DATE: 06/04

APPROVED
DANIEL ARELLANO 2004
SECTION ENGINEER DATE
BOND M. YEE 2004
DEP. DIRECTOR AND CITY TRAFFIC ENGINEER DATE

SCALE: 1"=50'
SHEET OF SHEETS

TRAFFIC STRIPING

CESAR CHAVEZ STREET
VERMONT STREET TO MISSISSIPPI

CONTRACT NO.
DRAWING NO. STR-7681.1
FILE NO.
REV. NO. 2

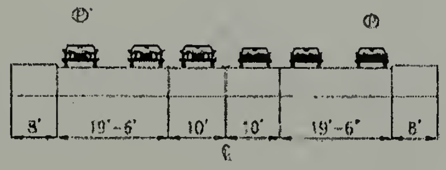
Appendix A2:

Option 1 and Option 2 Cross Section

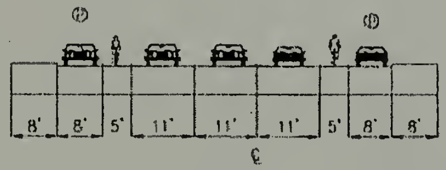
Looking east towards 3rd St.

US 101 (KANSAS) TO I-280 (MISSISSIPPI)

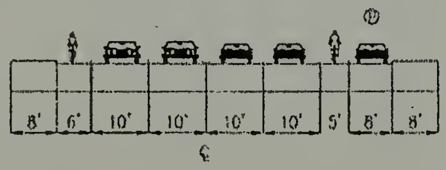
Existing



Option 1



Option 2



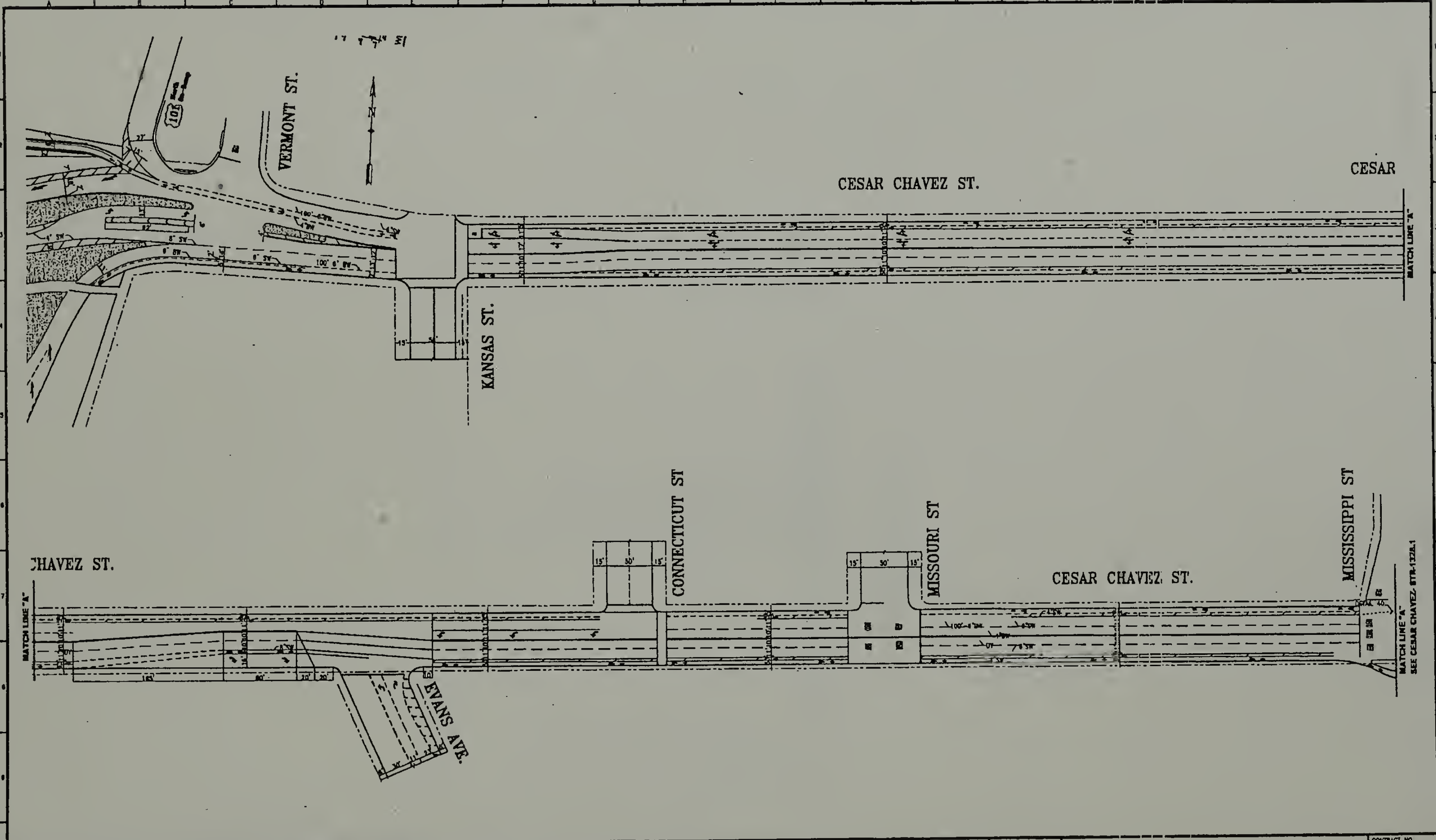
DEPARTMENT OF PARKING AND TRAFFIC
DIVISION OF TRAFFIC ENGINEERING
CITY AND COUNTY OF SAN FRANCISCO

PROJECT 5-6 EXISTING, OPTIONS 1 AND 2

CESAR CHAVEZ
US 101 (KANSAS) TO I-280 (MISSISSIPPI)

Appendix A3:

Modified Project Striping



3	XX/XX/11	ADDED BIKE LANES	RDM	VS
2	03/17/09	LANE RECHANNELIZATION FROM MISSOURI TO CONNECTICUT	TA	CT
1	04/27/04	CHANGED STRIPING FROM KANSAS TO US101	TA	MOW
NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
CITY AND COUNTY OF SAN FRANCISCO

DESIGNED: SB	DATE: 06/04	APPROVED DANIEL ARELLANO 2004 SECTION ENGINEER DATE	SCALE: 1"=50'
DRAWN: TA	DATE: 06/04		SHEET OF SHEETS
CHECKED: AKW	DATE: 06/04	BOND M. YEE 2004 CITY TRAFFIC ENGINEER DATE	

DRAFT BICYCLE PLAN PROJECT 5-5

CESAR CHAVEZ STREET
VERMONT STREET TO MISSISSIPPI

CONTRACT NO.
DRAWING NO. STR-7681.1
FILE NO.
REV. NO. 4

Appendix B:

Intersection Level of Service Calculations

```
---------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
                             Existing Conditions
---------------------------------------------------------------------------------
                        Level Of Service Computation Report
              2000 HCM Unsignalized Method (Base Volume Alternative)
*********************************************************************************
Intersection #1 Cesar Chavez/Vermont
*********************************************************************************
Average Delay (sec/veh):       3.0       Worst Case Level Of Service: C[ 24.8]
*********************************************************************************
Street Name:             Vermont Street                  Cesar Chavez Street
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Yield Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:           Include          Include          Include           Include
Lanes:        0  0  0  0  0   0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0    23    0   148    74  460     0     0  879    92
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0    23    0   148    74  460     0     0  879    92
Added Vol:       0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0    0     0    23    0   148    74  460     0     0  879    92
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94
PHF Volume:      0    0     0    24    0   157    79  489     0     0  935    98
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:     0    0     0    24    0   157    79  489     0     0  935    98
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1386 1631   516  1033 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   137  103   509   681 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   124   91   509   681 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.20 0.00  0.31  0.12 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.4 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  11.0 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     B    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  360 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  2.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 24.8 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    C     *     *    *     *     *    *     *
ApproachDel:      xxxxxx             24.8             xxxxxx            xxxxxx
ApproachLOS:         *                 C                 *                 *
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
```

```
--------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
                              Existing Conditions
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #2 Cesar Chavez Street/ Evans Street
********************************************************************************
Cycle (sec):          75               Critical Vol./Cap.(X):          0.826
Loss Time (sec):      12               Average Delay (sec/veh):         47.4
Optimal Cycle:       115               Level Of Service:                   D
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected         Protected         Permitted         Protected
Rights:          Include           Include           Ovl              Include
Min. Green:   19    0    19     0    0     0     0   21    40    22   47     0
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:       1  0  1!  0  0    0  0  0  0  0    0  0  2  0  1    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    468    0   344     0    0     0     0  635   370   334 1093     0
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 468    0   344     0    0     0     0  635   370   334 1093     0
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:  493    0   362     0    0     0     0  668   389   352 1151     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 493    0   362     0    0     0     0  668   389   352 1151     0
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 493    0   362     0    0     0     0  668   389   352 1151     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment: 0.88 1.00  0.84  1.00 1.00  1.00  1.00 0.93  0.66  0.93 0.91  1.00
Lanes:      1.39 0.00  0.61  0.00 0.00  0.00  0.00 2.00  1.00  1.00 2.00  0.00
Final Sat.: 2335    0   967     0    0     0     0 3538  1263  1769 3446     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.21 0.00  0.37  0.00 0.00  0.00  0.00 0.19  0.31  0.20 0.33  0.00
Crit Moves:            ****                                         ****
Green Time: 18.3  0.0  18.3   0.0  0.0   0.0   0.0 20.2  38.5  25.0 45.2   0.0
Volume/Cap: 0.87 0.00  1.54  0.00 0.00  0.00  0.00 0.70  0.60  0.60 0.55  0.00
Delay/Veh:  38.4  0.0 279.8   0.0  0.0   0.0   0.0 30.0  17.5  26.0 10.3   0.0
User DelAdj: 1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh: 38.4  0.0 279.8   0.0  0.0   0.0   0.0 30.0  17.5  26.0 10.3   0.0
LOS by Move:   D    A     F     A    A     A     A    C     B     C    B     A
HCM2kAvgQ:    11    0    42     0    0     0     0    9     7     8    9     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
-------------------------------------------------------------------------------
                         Cesar Chavez East Bike Lane
                             Existing Conditions
-------------------------------------------------------------------------------

                    Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #3 Cesar Chavez/Connecticut
*******************************************************************************
Cycle (sec):            75               Critical Vol./Cap.(X):         0.538
Loss Time (sec):         8 (Y+R=4.0 sec) Average Delay (sec/veh):        11.4
Optimal Cycle:          75               Level Of Service:                  B
*******************************************************************************
Street Name:          Connecticut Street              Cesar Chavez Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Split Phase      Split Phase     Permit+Prot       Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0   19   19    19    8   48    48   36   36    36
Lanes:        0  0  0  0  0   0  0  1! 0  0   0  1  1  0  0   0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   20    0    86   56  594     0    0  723    78
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0    0     0   20    0    86   56  594     0    0  723    78
Added Vol:      0    0     0    0    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0   20    0    86   56  594     0    0  723    78
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     0.93 0.93  0.93 0.93 0.93  0.93 0.93 0.93  0.93 0.93 0.93  0.93
PHF Volume:     0    0     0   22    0    92   60  639     0    0  777    84
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0    0     0   22    0    92   60  639     0    0  777    84
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0    0     0   22    0    92   60  639     0    0  777    84
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  1.00 1.00  1.00 0.69 1.00  0.69 0.82 0.93  1.00 1.00 0.84  0.84
Lanes:       0.00 0.00  0.00 0.19 0.00  0.81 0.17 1.83  0.00 0.00 2.71  0.29
Final Sat.:     0    0     0  247    0  1061  264 3227     0    0 4304   464
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.09 0.00  0.09 0.23 0.20  0.00 0.00 0.18  0.18
Crit Moves:                  ****            ****
Green/Cycle: 0.00 0.00  0.00 0.25 0.00  0.25 0.64 0.64  0.00 0.00 0.48  0.48
Volume/Cap:  0.00 0.00  0.00 0.34 0.00  0.34 0.34 0.31  0.00 0.00 0.38  0.38
Delay/Veh:    0.0  0.0   0.0 25.7  0.0  25.7 15.7  6.4   0.0  0.0 12.8  12.8
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0 25.7  0.0  25.7 15.7  6.4   0.0  0.0 12.8  12.8
LOS by Move:    A    A     A    C    A     C    B    A     A    A    B     B
HCM2kAvgQ:      0    0     0    2    0     2    4    4     0    0    5     5
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

```
--------------------------------------------------------------------------------
                         Cesar Chavez East Bike Lane
                             Existing Conditions
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #4 Cesar Chavez/ Pennsylvania/ I-280 Ramps
********************************************************************************
Cycle (sec):           90              Critical Vol./Cap.(X):        0.693
Loss Time (sec):       15              Average Delay (sec/veh):       31.9
Optimal Cycle:         90              Level Of Service:                 C
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Protected        Permitted
Rights:          Include           Ovl             Include          Ignore
Min. Green:   22   22   22    12    0   12    18   41    0     0   18   18
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:       1  0  1  0  1   1  0  0  0  1   1  0  2  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    195  116  410    99    0  416   331  553    0     0  266  480
Growth Adj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  195  116  410    99    0  416   331  553    0     0  266  480
User Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00
PHF Adj:    0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.00
PHF Volume:   205  122  432   104    0  438   348  582    0     0  280    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  205  122  432   104    0  438   348  582    0     0  280    0
PCE Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00
MLF Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00
FinalVolume:  205  122  432   104    0  438   348  582    0     0  280    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment: 0.93 0.98 1.25  0.93 1.00 0.78  0.93 0.93 1.00  1.00 0.93 1.00
Lanes:      1.00 1.00 1.00  1.00 0.00 1.00  1.00 2.00 0.00  0.00 2.00 1.00
Final Sat.: 1769 1862 2374  1769    0 1477  1769 3538    0     0 3538 1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.12 0.07 0.18  0.06 0.00 0.30  0.20 0.16 0.00  0.00 0.08 0.00
Crit Moves: ****                      ****        ****
Green Time: 22.0 22.0 22.0  12.0  0.0 35.0  23.0 41.0  0.0   0.0 18.0  0.0
Volume/Cap: 0.47 0.27 0.74  0.44 0.00 0.76  0.77 0.36 0.00  0.00 0.40 0.00
Delay/Veh:  32.8 28.9 39.8  41.8  0.0 33.2  43.0 16.6  0.0   0.0 32.9  0.0
User DelAdj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh: 32.8 28.9 39.8  41.8  0.0 33.2  43.0 16.6  0.0   0.0 32.9  0.0
LOS by Move:    C    C    D     D    A    C     D    B    A     A    C    A
HCM2kAvgQ:      5    3   13     3    0   12    11    6    0     0    4    0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
Existing+Project PM (Opt 1)Sun Feb 12, 2012 19:09:14                 Page 2-1
--------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
                  Existing Plus Project Conditions - Option 1
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #2 Cesar Chavez Street/ Evans Street
********************************************************************************
Cycle (sec):          75                Critical Vol./Cap.(X):         1.179
Loss Time (sec):       9                Average Delay (sec/veh):        87.9
Optimal Cycle:       180                Level Of Service:                  F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted       Protected
Rights:           Include          Include            Ovl             Include
Min. Green:    19    0    19     0    0     0     0   21    40    22   47     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  1  0  1    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     468    0   344     0    0     0     0  635   370   334 1093     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  468    0   344     0    0     0     0  635   370   334 1093     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:   493    0   362     0    0     0     0  668   389   352 1151     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  493    0   362     0    0     0     0  668   389   352 1151     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  493    0   362     0    0     0     0  668   389   352 1151     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.65 1.00  0.68  1.00 1.00  1.00  1.00 0.98  0.67  0.93 0.91  1.00
Lanes:       1.42 0.00  0.58  0.00 0.00  0.00  0.00 1.00  1.00  1.00 2.00  0.00
Final Sat.:  1750    0   755     0    0     0     0 1862  1274  1769 3446     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.28 0.00  0.48  0.00 0.00  0.00  0.00 0.36  0.31  0.20 0.33  0.00
Crit Moves:             ****                        ****        ****
Green Time:  23.0  0.0  23.0   0.0  0.0   0.0   0.0 21.0  21.0  22.0 43.0   0.0
Volume/Cap:  0.92 0.00  1.56  0.00 0.00  0.00  0.00 1.28  1.09  0.68 0.58  0.00
Delay/Veh:   40.4  0.0 288.6   0.0  0.0   0.0   0.0  168 101.5  30.3 11.5   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  40.4  0.0 288.6   0.0  0.0   0.0   0.0  168 101.5  30.3 11.5   0.0
LOS by Move:    D    A     F     A    A     A     A    F     F     C    B     A
HCM2kAvgQ:     12    0    43     0    0     0     0   36    17     8    9     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************



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```

```
-------------------------------------------------------------------------------
                         Cesar Chavez East Bike Lane
                  Existing Plus Project Conditions - Option 1
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
              2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #4 Cesar Chavez/ Pennsylvania/ I-280 Ramps
*******************************************************************************
Cycle (sec):          90              Critical Vol./Cap.(X):        0.870
Loss Time (sec):      15              Average Delay (sec/veh):       33.6
Optimal Cycle:       138              Level Of Service:                 C
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Permitted
Rights:           Include            Ovl            Include          Ignore
Min. Green:    22   22    22    12    0    12    18   41     0     0   18    18
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  1  0  1    1  0  0  0  1    1  0  1  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     195  116   410    99    0   416   331  553     0     0  266   480
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  195  116   410    99    0   416   331  553     0     0  266   480
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.00
PHF Volume:   205  122   432   104    0   438   348  582     0     0  280     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  205  122   432   104    0   438   348  582     0     0  280     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:  205  122   432   104    0   438   348  582     0     0  280     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.98  1.25  0.93 1.00  0.78  0.93 0.98  1.00  1.00 0.93  1.00
Lanes:       1.00 1.00  1.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 2.00  1.00
Final Sat.:  1769 1862  2374  1769    0  1477  1769 1862     0     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.07  0.18  0.06 0.00  0.30  0.20 0.31  0.00  0.00 0.08  0.00
Crit Moves:  ****                        ****       ****
Green Time:  22.0 22.0  22.0  12.0  0.0  35.0  23.0 41.0   0.0   0.0 18.0   0.0
Volume/Cap:  0.47 0.27  0.74  0.44 0.00  0.76  0.77 0.69  0.00  0.00 0.40  0.00
Delay/Veh:   32.8 28.9  39.8  41.8  0.0  33.2  43.0 23.9   0.0   0.0 32.9   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  32.8 28.9  39.8  41.8  0.0  33.2  43.0 23.9   0.0   0.0 32.9   0.0
LOS by Move:    C    C     D     D    A     C     D    C     A     A    C     A
HCM2kAvgQ:      5    3    13     3    0    12    11   14     0     0    4     0
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

```
-------------------------------------------------------------------------------
                      Cesar Chavez East Bike Lane
              Existing Plus Project Conditions - Option 2
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #2 Cesar Chavez Street/ Evans Street
*******************************************************************************
Cycle (sec):           75              Critical Vol./Cap.(X):         0.926
Loss Time (sec):       12              Average Delay (sec/veh):        47.6
Optimal Cycle:        180              Level Of Service:                  D
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Protected        Protected         Permitted        Protected
Rights:          Include          Include             Ovl            Include
Min. Green:    19     0    19    0     0     0    0    21    40    22    47     0
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0   4.0   4.0   4.0
Lanes:         1  0  1!  0  0   0  0  0  0  0    0  0  2  0  1    1  0  2  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     468     0   344     0     0     0     0   635   370   334  1093     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  468     0   344     0     0     0     0   635   370   334  1093     0
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:   493     0   362     0     0     0     0   668   389   352  1151     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  493     0   362     0     0     0     0   668   389   352  1151     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  493     0   362     0     0     0     0   668   389   352  1151     0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.88  1.00  0.84  1.00  1.00  1.00  1.00  0.93  0.66  0.93  0.91  1.00
Lanes:       1.39  0.00  0.61  0.00  0.00  0.00  0.00  2.00  1.00  1.00  2.00  0.00
Final Sat.:  2335     0   967     0     0     0     0  3538  1263  1769  3446     0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.21  0.00  0.37  0.00  0.00  0.00  0.00  0.19  0.31  0.20  0.33  0.00
Crit Moves:              ****                                             ****
Green Time:  18.3   0.0  18.3   0.0   0.0   0.0   0.0  20.2  38.5  25.0  45.2   0.0
Volume/Cap:  0.87  0.00  1.54  0.00  0.00  0.00  0.00  0.70  0.60  0.60  0.55  0.00
Delay/Veh:   38.4   0.0 279.8   0.0   0.0   0.0   0.0  30.0  17.5  26.0  10.3   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  38.4   0.0 279.8   0.0   0.0   0.0   0.0  30.0  17.5  26.0  10.3   0.0
LOS by Move:    D     A     F     A     A     A     A     C     B     C     B     A
HCM2kAvgQ:     11     0    42     0     0     0     0     9     7     8     9     0
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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------------------------------------------------------------------------------
                      Cesar Chavez East Bike Lane
              Existing Plus Project Conditions - Option 2
------------------------------------------------------------------------------

                   Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #4 Cesar Chavez/ Pennsylvania/ I-280 Ramps
******************************************************************************
Cycle (sec):          90             Critical Vol./Cap.(X):        0.693
Loss Time (sec):      15             Average Delay (sec/veh):       31.9
Optimal Cycle:        90             Level Of Service:                 C
******************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Permitted
Rights:           Include           Ovl            Include           Ignore
Min. Green:    22   22    22   12    0    12   18   41     0    0   18    18
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  1  0  1   1  0  0  0  1   1  0  2  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     195  116   410   99    0   416  331  553     0    0  266   480
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  195  116   410   99    0   416  331  553     0    0  266   480
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  0.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.95 0.95 0.95  0.00
PHF Volume:   205  122   432  104    0   438  348  582     0    0  280     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  205  122   432  104    0   438  348  582     0    0  280     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  0.00
FinalVolume:  205  122   432  104    0   438  348  582     0    0  280     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.93 0.98  1.25 0.93 1.00  0.78 0.93 0.93  1.00 1.00 0.93  1.00
Lanes:       1.00 1.00  1.00 1.00 0.00  1.00 1.00 2.00  0.00 0.00 2.00  1.00
Final Sat.:  1769 1862  2374 1769    0  1477 1769 3538     0    0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.07  0.18 0.06 0.00  0.30 0.20 0.16  0.00 0.00 0.08  0.00
Crit Moves:  ****                       ****      ****
Green Time:  22.0 22.0  22.0 12.0  0.0  35.0 23.0 41.0   0.0  0.0 18.0   0.0
Volume/Cap:  0.47 0.27  0.74 0.44 0.00  0.76 0.77 0.36  0.00 0.00 0.40  0.00
Delay/Veh:   32.8 28.9  39.8 41.8  0.0  33.2 43.0 16.6   0.0  0.0 32.9   0.0
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  32.8 28.9  39.8 41.8  0.0  33.2 43.0 16.6   0.0  0.0 32.9   0.0
LOS by Move:    C    C     D    D    A     C    D    B     A    A    C     A
HCM2kAvgQ:      5    3    13    3    0    12   11    6     0    0    4     0
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
```

```
Existing+Project PM (Mod)  Sun Feb 12, 2012 19:36:34                 Page 4-1
------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
              Existing Plus Project Conditions - Modified Option
------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
******************************************************************************
Intersection #1 Cesar Chavez Street/ Vermont Street
******************************************************************************
Average Delay (sec/veh):       3.1       Worst Case Level Of Service: D[ 25.7]
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0    0     0     23    0   148     74  460     0     0  879    92
Growth Adj:   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     0    0     0     23    0   148     74  460     0     0  879    92
User Adj:     1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.94 0.94  0.94   0.94 0.94  0.94   0.94 0.94  0.94  0.94 0.94  0.94
PHF Volume:      0    0     0     24    0   157     79  489     0     0  935    98
Reduct Vol:      0    0     0      0    0     0      0    0     0     0    0     0
FinalVolume:     0    0     0     24    0   157     79  489     0     0  935    98
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx    6.4  6.5   6.2    4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx    3.5  4.0   3.3    2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   1631 1631   516   1033 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    113  103   563    681 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    103   91   563    681 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx   0.24 0.00  0.28   0.12 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   xxxx xxxx xxxxx    0.4 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   11.0 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *      *    *     *      B    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   xxxx  351 xxxxx   xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  2.8 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 25.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *      *    D     *      *    *     *     *    *     *
ApproachDel:       xxxxxx             25.7             xxxxxx           xxxxxx
ApproachLOS:          *                 D                 *                *
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
```

```
--------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
            Existing Plus Project Conditions - Modified Option
--------------------------------------------------------------------------------

                       Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #2 Cesar Chavez Street/ Evans Street
********************************************************************************
Cycle (sec):          115               Critical Vol./Cap.(X):         1.033
Loss Time (sec):       12               Average Delay (sec/veh):        50.7
Optimal Cycle:        180               Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Permitted        Protected
Rights:          Include           Include            Ovl             Include
Min. Green:    34    0    76     0    0     0     0   29    68    38   71     0
Y+R:          5.0  4.0   5.0   4.0  4.0   4.0   4.0  5.0   5.0   5.0  5.0   4.0
Lanes:        1  0  0  0  1    0  0  0  0  0    0  0  2  0  1    1  0  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     468    0   344     0    0     0     0  635   370   334 1093     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  468    0   344     0    0     0     0  635   370   334 1093     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:   493    0   362     0    0     0     0  668   389   352 1151     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  493    0   362     0    0     0     0  668   389   352 1151     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  493    0   362     0    0     0     0  668   389   352 1151     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 1.00  0.78  1.00 1.00  1.00  1.00 0.93  0.65  0.93 0.93  1.00
Lanes:       1.00 0.00  1.00  0.00 0.00  0.00  0.00 2.00  1.00  1.00 1.00  0.00
Final Sat.:  1769    0  1481     0    0     0     0 3538  1227  1769 1765     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.28 0.00  0.24  0.00 0.00  0.00  0.00 0.19  0.32  0.20 0.65  0.00
Crit Moves:  ****                                                    ****
Green Time:  32.3  0.0  76.0   0.0  0.0   0.0   0.0 27.6  59.9  43.7 71.3   0.0
Volume/Cap:  0.99 0.00  0.37  0.00 0.00  0.00  0.00 0.79  0.61  0.52 1.05  0.00
Delay/Veh:   81.6  0.0  10.3   0.0  0.0   0.0   0.0 50.5  24.6  31.9 64.8   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  81.6  0.0  10.3   0.0  0.0   0.0   0.0 50.5  24.6  31.9 64.8   0.0
LOS by Move:    F    A     B     A    A     A     A    D     C     C    E     A
HCM2kAvgQ:     24    0     6     0    0     0     0   14    11    10   55     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
--------------------------------------------------------------------------------
                         Cesar Chavez East Bike Lane
             Existing Plus Project Conditions - Modified Option
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
           2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #3 Cesar Chavez Street/ Connecticut Street
********************************************************************************
Cycle (sec):          115                Critical Vol./Cap.(X):         0.366
Loss Time (sec):       12                Average Delay (sec/veh):        12.1
Optimal Cycle:        117                Level Of Service:                  B
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0   19     0    19   86    86     0    0    73    73
Y+R:         4.0   4.0   4.0  5.0   4.0   5.0  5.0   5.0   4.0  4.0   5.0   5.0
Lanes:        0  0  0  0  0    0  0  1! 0  0    0  1  1  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0   20     0    86   56   594     0    0   723    78
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   0     0     0   20     0    86   56   594     0    0   723    78
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    0.93  0.93  0.93 0.93  0.93  0.93 0.93  0.93  0.93 0.93  0.93  0.93
PHF Volume:    0     0     0   22     0    92   60   639     0    0   777    84
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0   22     0    92   60   639     0    0   777    84
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0     0     0   22     0    92   60   639     0    0   777    84
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900  1900
Adjustment: 1.00  1.00  1.00 0.87  1.00  0.74 0.74  0.74  1.00 1.00  0.92  0.91
Lanes:      0.00  0.00  0.00 0.17  0.00  0.83 0.17  1.83  0.00 0.00  1.80  0.20
Final Sat.:    0     0     0  271     0  1167  241  2560     0    0  3143   339
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00  0.00  0.00 0.08  0.00  0.08 0.25  0.25  0.00 0.00  0.25  0.25
Crit Moves:                  ****                   ****
Green Time:  0.0   0.0   0.0 18.7   0.0  18.7 84.5  84.5   0.0  0.0  84.5  84.5
Volume/Cap: 0.00  0.00  0.00 0.49  0.00  0.49 0.34  0.34  0.00 0.00  0.34  0.34
Delay/Veh:   0.0   0.0   0.0 51.7   0.0  51.7  5.9   5.9   0.0  0.0   5.8   5.8
User DelAdj: 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
AdjDel/Veh:  0.0   0.0   0.0 51.7   0.0  51.7  5.9   5.9   0.0  0.0   5.8   5.8
LOS by Move:   A     A     A    D     A     D    A     A     A    A     A     A
HCM2kAvgQ:     0     0     0    5     0     4    5     5     0    0     6     6
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

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--------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
              Existing Plus Project Conditions - Modified Option
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
                2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #4 Cesar Chavez/ Pennsylvania/ I-280 Ramps
********************************************************************************
Cycle (sec):          90                 Critical Vol./Cap.(X):         0.693
Loss Time (sec):      15                 Average Delay (sec/veh):        31.9
Optimal Cycle:        90                 Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:       Split Phase      Split Phase       Protected         Permitted
Rights:          Include            Ovl            Include            Ignore
Min. Green:    22    22    22   12     0    12    18   41     0     0   18    18
Y+R:          4.0   4.0   4.0  4.0   4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1   0   1   0   1  1   0   0   0   1  1   0   2   0   0  0   0   2   0   1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     195   116   410   99     0   416   331  553     0     0  266   480
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  195   116   410   99     0   416   331  553     0     0  266   480
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     0.95  0.95  0.95 0.95  0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.00
PHF Volume:   205   122   432  104     0   438   348  582     0     0  280     0
Reduct Vol:     0     0     0    0     0     0     0    0     0     0    0     0
Reduced Vol:  205   122   432  104     0   438   348  582     0     0  280     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:  205   122   432  104     0   438   348  582     0     0  280     0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900 1900  1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93  0.98  1.25 0.93  1.00  0.78  0.93 0.93  1.00  1.00 0.93  1.00
Lanes:       1.00  1.00  1.00 1.00  0.00  1.00  1.00 2.00  0.00  0.00 2.00  1.00
Final Sat.:  1769  1862  2374 1769     0  1477  1769 3538     0     0 3538  1900
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.12  0.07  0.18 0.06  0.00  0.30  0.20 0.16  0.00  0.00 0.08  0.00
Crit Moves:  ****                         ****        ****
Green Time:  22.0  22.0  22.0 12.0   0.0  35.0  23.0 41.0   0.0   0.0 18.0   0.0
Volume/Cap:  0.47  0.27  0.74 0.44  0.00  0.76  0.77 0.36  0.00  0.00 0.40  0.00
Delay/Veh:   32.8  28.9  39.8 41.8   0.0  33.2  43.0 16.6   0.0   0.0 32.9   0.0
User DelAdj: 1.00  1.00  1.00 1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  32.8  28.9  39.8 41.8   0.0  33.2  43.0 16.6   0.0   0.0 32.9   0.0
LOS by Move:    C     C     D    D     A     C     D    B     A     A    C     A
HCM2kAvgQ:      5     3    13    3     0    12    11    6     0     0    4     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

```
-------------------------------------------------------------------------------
                        Ceasar Chavez East Bike Lane
                         Cumulative 2030 Conditions
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*******************************************************************************
Intersection #1 Cesar Chavez/Vermont
*******************************************************************************
Average Delay (sec/veh):     210.8       Worst Case Level Of Service: F[1729.1]
*******************************************************************************
Street Name:              Vermont Street                Cesar Chavez Street
Approach:          North Bound      South Bound      East Bound       West Bound
Movement:        L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:             Include          Include          Include          Include
Lanes:           0  0  0  0  0   0  0  1! 0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:           0    0     0   148    0   181    96  598     0     0 1625   132
Growth Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:        0    0     0   148    0   181     0  598     0     0 1625   132
Added Vol:          0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:        0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:        0    0     0   148    0   181    96  598     0     0 1625   132
User Adj:        1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:         0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94
PHF Volume:         0    0     0   157    0   193   102  636     0     0 1729   140
Reduct Vol:         0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:        0    0     0   157    0   193   102  636     0     0 1729   140
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  2151 2469   935  1869 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    42   31   271   327 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    41   29   271   327 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  3.89 0.00  0.71  0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  16.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     C    *     *     *    *     *
Movement:      LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx   76 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx 37.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 1729 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    F     *     *    *     *     *    *     *
ApproachDel:      xxxxxx            1729.1             xxxxxx            xxxxxx
ApproachLOS:         *                 F                  *                 *
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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--------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
                          Cumulative 2030 Conditions
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Cesar Chavez Street/ Evans Street
********************************************************************************
Cycle (sec):          75                Critical Vol./Cap.(X):        1.365
Loss Time (sec):       9                Average Delay (sec/veh):      222.3
Optimal Cycle:       180                Level Of Service:                 F
********************************************************************************
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted         Protected
Rights:           Include          Include            Ovl              Include
Min. Green:   19    0    19     0    0     0     0   21    21    22   47     0
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  1!  0  0    0  0  0  0  0    0  0  2  0  1    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     800    0   558     0    0     0     0 1060   618   470 1536     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  800    0   558     0    0     0     0 1060   618   470 1536     0
User Adj:    1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:   859    0   599     0    0     0     0 1138   664   505 1649     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  859    0   599     0    0     0     0 1138   664   505 1649     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  859    0   599     0    0     0     0 1138   664   505 1649     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.72 1.00  0.73  1.00 1.00  1.00  1.00 0.93  0.82  0.93 0.91  1.00
Lanes:       1.42 0.00  0.58  0.00 0.00  0.00  0.00 2.00  1.00  1.00 2.00  0.00
Final Sat.:  1943    0   802     0    0     0     0 3538  1551  1769 3446     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.44 0.00  0.75  0.00 0.00  0.00  0.00 0.32  0.43  0.29 0.48  0.00
Crit Moves:             ****                                         ****
Green Time:  19.0  0.0  19.0   0.0  0.0   0.0   0.0 21.0  21.0  26.0 47.0   0.0
Volume/Cap:  1.75 0.00  2.95  0.00 0.00  0.00  0.00 1.15  1.53  0.82 0.76  0.00
Delay/Veh:  368.4  0.0 910.0   0.0  0.0   0.0   0.0  106 276.0  34.3 12.7   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh: 368.4  0.0 910.0   0.0  0.0   0.0   0.0  106 276.0  34.3 12.7   0.0
LOS by Move:    F    A     F     A    A     A     A    F     F     C    B     A
HCM2kAvgQ:     47    0   108     0    0     0     0   27    45    13   16     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

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-----------------------------------------------------------------------------
                      Cesar Chavez East Bike Lane
                       Cumulative 2030 Conditions
-----------------------------------------------------------------------------

                   Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
*****************************************************************************
Intersection #3 Cesar Chavez/Connecticut
*****************************************************************************
Cycle (sec):          75                Critical Vol./Cap.(X):         1.647
Loss Time (sec):       8 (Y+R=4.0 sec)  Average Delay (sec/veh):        49.3
Optimal Cycle:        90                Level Of Service:                  D
*****************************************************************************
Street Name:          Connecticut Street               Cesar Chavez Street
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase     Permit+Prot       Permitted
Rights:           Include          Include         Include          Include
Min. Green:    0     0     0   19    19    19    8    48    48   36    36    36
Lanes:       0  0  0  0  0   0  0  1! 0  0   0  1  1  0  0   0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0   38     0   384  484  1129     0    0  1337   200
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   0     0     0    0     0   384  484  1129     0    0  1337   200
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0     0     0   38     0   384  484  1129     0    0  1337   200
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     0.93  0.93  0.93  0.93  0.93  0.93  0.93  0.93  0.93  0.93  0.93  0.93
PHF Volume:    0     0     0   41     0   413  520  1215     0    0  1438   215
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0   41     0   413  520  1215     0    0  1438   215
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   0     0     0   41     0   413  520  1215     0    0  1438   215
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.68  1.00  0.68  0.79  0.92  1.00  1.00  0.83  0.83
Lanes:       0.00  0.00  0.00  0.09  0.00  0.91  0.60  1.40  0.00  0.00  2.61  0.39
Final Sat.:    0     0     0  116     0  1177  900  2445     0    0  4131   618
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.35  0.00  0.35  0.58  0.50  0.00  0.00  0.35  0.35
Crit Moves:                    ****              ****                    ****
Green/Cycle: 0.00  0.00  0.00  0.25  0.00  0.25  0.64  0.64  0.00  0.00  0.48  0.48
Volume/Cap:  0.00  0.00  0.00  1.39  0.00  1.39  1.13  0.78  0.00  0.00  0.73  0.73
Delay/Veh:    0.0   0.0   0.0 219.2   0.0 219.2  88.3  12.4   0.0   0.0  17.6  17.6
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0 219.2   0.0 219.2  88.3  12.4   0.0   0.0  17.6  17.6
LOS by Move:   A     A     A     F     A     F     F     B     A     A     B     B
HCM2kAvgQ:     0     0     0    28     0    28    38    17     0     0    12    12
*****************************************************************************
Note: Queue reported is the number of cars per lane.
*****************************************************************************
```

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------------------------------------------------------------------------------
                         Cesar Chavez East Bike Lane
                         Cumulative 2030 Conditions
------------------------------------------------------------------------------
                     Level Of Service Computation Report
             2000 HCM Operations Method (Future Volume Alternative)
******************************************************************************
Intersection #4 Cesar Chavez/ Pennsylvania/ I-280 Ramps
******************************************************************************
Cycle (sec):          90               Critical Vol./Cap.(X):         1.362
Loss Time (sec):      15               Average Delay (sec/veh):        77.3
Optimal Cycle:       180               Level Of Service:                  E
******************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Protected        Permitted
Rights:          Include           Ovl            Include           Ignore
Min. Green:    22   22    22    12    0    12    18   41     0     0   18    18
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  1  0  1    1  0  0  0  1    1  0  2  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     272  162   572   138    0   580   462  857     0     0  575   582
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  272  162   572   138    0   580   462  857     0     0  575   582
User Adj:    1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  0.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.00
PHF Volume:   292  174   614   148    0   623   496  920     0     0  617     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  292  174   614   148    0   623   496  920     0     0  617     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:  292  174   614   148    0   623   496  920     0     0  617     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.98  1.25  0.93 1.00  0.78  0.93 0.93  1.00  1.00 0.93  1.00
Lanes:       1.00 1.00  1.00  1.00 0.00  1.00  1.00 2.00  0.00  0.00 2.00  1.00
Final Sat.:  1769 1862  2374  1769    0  1477  1769 3538     0     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17 0.09  0.26  0.08 0.00  0.42  0.28 0.26  0.00  0.00 0.17  0.00
Crit Moves:             ****              ****  ****                  ****
Green Time:  22.0 22.0  22.0  17.0  0.0  35.0  18.0 36.0   0.0   0.0 18.0   0.0
Volume/Cap:  0.68 0.38  1.06  0.44 0.00  1.08  1.40 0.65  0.00  0.00 0.87  0.00
Delay/Veh:   39.0 30.8  87.8  36.5  0.0  90.0 233.2 24.2   0.0   0.0 48.9   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  39.0 30.8  87.8  36.5  0.0  90.0 233.2 24.2   0.0   0.0 48.9   0.0
LOS by Move:    D    C     F     D    A     F     F    C     A     A    D     A
HCM2kAvgQ:      8    4    26     4    0    28    33   12     0     0   12     0
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
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---------------------------------------------------------------------------------

                          Cesar Chavez East Bike Lane
                    Cumulative 2030 Conditions - Option 1
---------------------------------------------------------------------------------

                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
*********************************************************************************
Intersection #2 Cesar Chavez Street/ Evans Street
*********************************************************************************
Cycle (sec):          75                Critical Vol./Cap.(X):          1.832
Loss Time (sec):       9                Average Delay (sec/veh):        264.8
Optimal Cycle:       180                Level Of Service:                   F
*********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Protected
Rights:          Include          Include            Ovl            Include
Min. Green:    19     0    19    0     0     0    0    21    21   22    43     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  1  0  1    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     800     0   558    0     0     0    0  1060   618  470  1536     0
Growth Adj:  1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  800     0   558    0     0     0    0  1060   618  470  1536     0
User Adj:    1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     0.95 0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95
PHF Volume:   842     0   587    0     0     0    0  1116   651  495  1617     0
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  842     0   587    0     0     0    0  1116   651  495  1617     0
PCE Adj:     1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  842     0   587    0     0     0    0  1116   651  495  1617     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900  1900  1900 1900  1900  1900 1900  1900  1900
Adjustment:  0.72 1.00  0.73 1.00  1.00  1.00 1.00  0.98  0.82 0.93  0.91  1.00
Lanes:       1.42 0.00  0.58 0.00  0.00  0.00 0.00  1.00  1.00 1.00  2.00  0.00
Final Sat.:  1939     0   802    0     0     0    0  1862  1551 1769  3446     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.43 0.00  0.73 0.00  0.00  0.00 0.00  0.60  0.42 0.28  0.47  0.00
Crit Moves:             ****                        ****       ****
Green Time:  23.0  0.0  23.0  0.0   0.0   0.0  0.0  21.0  21.0 22.0  43.0   0.0
Volume/Cap:  1.42 0.00  2.39 0.00  0.00  0.00 0.00  2.14  1.50 0.95  0.82  0.00
Delay/Veh:  219.2  0.0 656.3  0.0   0.0   0.0  0.0   546 262.9 55.5  16.8   0.0
User DelAdj: 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
AdjDel/Veh: 219.2  0.0 656.3  0.0   0.0   0.0  0.0   546 262.9 55.5  16.8   0.0
LOS by Move:    F    A     F    A     A     A    A     F     F    E     B     A
HCM2kAvgQ:     37    0    97    0     0     0    0    99    43   17    18     0
*********************************************************************************
Note: Queue reported is the number of cars per lane.
*********************************************************************************
```

```
-------------------------------------------------------------------------------
                         Cesar Chavez East Bike Lane
                    Cumulative 2030 Conditions - Option 1
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #4 Cesar Chavez/ Pennsylvania/ I-280 Ramps
*******************************************************************************
Cycle (sec):         90               Critical Vol./Cap.(X):         1.382
Loss Time (sec):     15               Average Delay (sec/veh):        69.7
Optimal Cycle:      180               Level Of Service:                  E
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Protected         Permitted
Rights:          Include            Ovl            Include           Ignore
Min. Green:   22    22    22   12     0    12   18    41     0    0    18    18
Y+R:         4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0
Lanes:        1  0  1  0  1    1  0  0  0  1    1  0  1  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     272  162   572   138    0   580   462  857     0     0  575   582
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  272  162   572   138    0   580   462  857     0     0  575   582
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.00
PHF Volume:   286  171   602   145    0   611   486  902     0     0  605     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  286  171   602   145    0   611   486  902     0     0  605     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:  286  171   602   145    0   611   486  902     0     0  605     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.98  1.25  0.93 1.00  0.78  0.93 0.98  1.00  1.00 0.93  1.00
Lanes:       1.00 1.00  1.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 2.00  1.00
Final Sat.:  1769 1862  2374  1769    0  1477  1769 1862     0     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.16 0.09  0.25  0.08 0.00  0.41  0.27 0.48  0.00  0.00 0.17  0.00
Crit Moves:             ****              ****       ****
Green Time:  22.0 22.0  22.0  12.0  0.0  35.0  23.0 41.0   0.0   0.0 18.0   0.0
Volume/Cap:  0.66 0.37  1.04  0.62 0.00  1.06  1.08 1.06  0.00  0.00 0.86  0.00
Delay/Veh:   38.4 30.6  81.5  48.3  0.0  83.0  97.6 73.7   0.0   0.0 47.4   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  38.4 30.6  81.5  48.3  0.0  83.0  97.6 73.7   0.0   0.0 47.4   0.0
LOS by Move:    D    C     F     D    A     F     F    E     A     A    D     A
HCM2kAvgQ:      8    4    25     5    0    27    22   37     0     0   11     0
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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--------------------------------------------------------------------------------
                        Cesar Chavez East Bike Lane
                   Cumulative 2030 Conditions - Option 2
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #2 Cesar Chavez Street/ Evans Street
********************************************************************************
Cycle (sec):          75                Critical Vol./Cap.(X):         1.365
Loss Time (sec):       9                Average Delay (sec/veh):       213.3
Optimal Cycle:       180                Level Of Service:                  F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted       Protected
Rights:           Include          Include           Ovl             Include
Min. Green:   19    0    19     0    0     0     0   21    21    22   47     0
Y+R:         5.0  5.0   5.0   5.0  5.0   5.0   5.0  5.0   5.0   5.0  5.0   5.0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  0  1    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    800    0   558     0    0     0     0 1060   618   470 1536     0
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 800    0   558     0    0     0     0 1060   618   470 1536     0
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:  842    0   587     0    0     0     0 1116   651   495 1617     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 842    0   587     0    0     0     0 1116   651   495 1617     0
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 842    0   587     0    0     0     0 1116   651   495 1617     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment: 0.72 1.00  0.73  1.00 1.00  1.00  1.00 0.93  0.82  0.93 0.91  1.00
Lanes:      1.42 0.00  0.58  0.00 0.00  0.00  0.00 2.00  1.00  1.00 2.00  0.00
Final Sat.: 1943    0   802     0    0     0     0 3538  1551  1769 3446     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.43 0.00  0.73  0.00 0.00  0.00  0.00 0.32  0.42  0.28 0.47  0.00
Crit Moves:            ****                                          ****
Green Time: 19.0  0.0  19.0   0.0  0.0   0.0   0.0 21.0  21.0  26.0 47.0   0.0
Volume/Cap: 1.71 0.00  2.89  0.00 0.00  0.00  0.00 1.13  1.50  0.81 0.75  0.00
Delay/Veh: 353.1  0.0 884.0   0.0  0.0   0.0   0.0 97.0 262.9  33.1 12.3   0.0
User DelAdj: 1.00 1.00 1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh: 353.1 0.0 884.0   0.0  0.0   0.0   0.0 97.0 262.9  33.1 12.3   0.0
LOS by Move:    F    A     F     A    A     A     A    F     F     C    B     A
HCM2kAvgQ:    45    0   105     0    0     0     0   26    43    13   15     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
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-------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
                     Cumulative 2030 Conditions - Option 2
-------------------------------------------------------------------------------
                        Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #4 Cesar Chavez/ Pennsylvania/ I-280 Ramps
*******************************************************************************
Cycle (sec):          90                Critical Vol./Cap.(X):         1.336
Loss Time (sec):      15                Average Delay (sec/veh):        73.3
Optimal Cycle:       180                Level Of Service:                  E
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:       Split Phase      Split Phase       Protected        Permitted
Rights:           Include           Ovl             Include          Ignore
Min. Green:    22    22    22    12     0    12    18    41     0     0    18    18
Y+R:          5.0   5.0   5.0   5.0   5.0   5.0   5.0   5.0   5.0   5.0   5.0   5.0
Lanes:        1  0  1  0  1    1  0  0  0  1    1  0  2  0  0    0  0  2  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     272   162   572   138     0   580   462   857     0     0   575   582
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  272   162   572   138     0   580   462   857     0     0   575   582
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.00
PHF Volume:   286   171   602   145     0   611   486   902     0     0   605     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  286   171   602   145     0   611   486   902     0     0   605     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00
FinalVolume:  286   171   602   145     0   611   486   902     0     0   605     0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.93  0.98  1.25  0.93  1.00  0.78  0.93  0.93  1.00  1.00  0.93  1.00
Lanes:       1.00  1.00  1.00  1.00  0.00  1.00  1.00  2.00  0.00  0.00  2.00  1.00
Final Sat.:  1769  1862  2374  1769     0  1477  1769  3538     0     0  3538  1900
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.16  0.09  0.25  0.08  0.00  0.41  0.27  0.25  0.00  0.00  0.17  0.00
Crit Moves:              ****              ****  ****                    ****
Green Time:  22.0  22.0  22.0  17.0   0.0  35.0  18.0  36.0   0.0   0.0  18.0   0.0
Volume/Cap:  0.66  0.37  1.04  0.43  0.00  1.06  1.37  0.64  0.00  0.00  0.86  0.00
Delay/Veh:   38.4  30.6  81.5  36.3   0.0  83.0 221.5  24.0   0.0   0.0  47.4   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  38.4  30.6  81.5  36.3   0.0  83.0 221.5  24.0   0.0   0.0  47.4   0.0
LOS by Move:    D     C     F     D     A     F     F     C     A     A     D     A
HCM2kAvgQ:      8     4    25     4     0    27    32    11     0     0    11     0
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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--------------------------------------------------------------------------------
                          Cesar Chavez East Bike Lane
                    Cumulative 2030 Conditions - Modified Project
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
              2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #1 Cesar Chavez Street/ Vermont Street
********************************************************************************
Average Delay (sec/veh):    214.4       Worst Case Level Of Service: F[1729.1]
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   148    0   181    96  598     0     0 1625   132
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0   148    0   181    96  598     0     0 1625   132
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94
PHF Volume:     0    0     0   157    0   193   102  636     0     0 1729   140
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0   157    0   193   102  636     0     0 1729   140
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  2151 2469   935  1869 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx    42   31   271   327 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx    41   29   271   327 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  3.89 0.00  0.71  0.31 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   1.3 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  21.0 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     C    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx   76 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx 37.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 1729 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    F     *     *    *     *     *    *     *
ApproachDel:     xxxxxx            1729.1            xxxxxx           xxxxxx
ApproachLOS:        *                 F                 *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************
```

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------------------------------------------------------------------------------
                         Cesar Chavez East Bike Lane
                Cumulative 2030 Conditions - Modified Project
------------------------------------------------------------------------------

                     Level Of Service Computation Report
           2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #2 Cesar Chavez Street/ Evans Street
******************************************************************************
Cycle (sec):          115                Critical Vol./Cap.(X):         1.645
Loss Time (sec):       12                Average Delay (sec/veh):       191.3
Optimal Cycle:        180                Level Of Service:                  F
******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Protected
Rights:          Include          Include            Ovl            Include
Min. Green:    34     0    76     0     0     0     0    29    68    38    71     0
Y+R:          5.0   4.0   5.0   4.0   4.0   4.0   4.0   5.0   5.0   5.0   5.0   4.0
Lanes:        1  0  0  0  1    0  0  0  0  0    0  0  2  0  1    1  0  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     800     0   558     0     0     0     0  1060   618   470  1536     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  800     0   558     0     0     0     0  1060   618   470  1536     0
User Adj:    1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02
PHF Adj:     0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
PHF Volume:   859     0   599     0     0     0     0  1138   664   505  1649     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  859     0   599     0     0     0     0  1138   664   505  1649     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  859     0   599     0     0     0     0  1138   664   505  1649     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.93  1.00  0.82  1.00  1.00  1.00  1.00  0.93  0.82  0.93  0.93  1.00
Lanes:       1.00  0.00  1.00  0.00  0.00  0.00  0.00  2.00  1.00  1.00  1.00  0.00
Final Sat.:  1769     0  1551     0     0     0     0  3538  1551  1769  1765     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.49  0.00  0.39  0.00  0.00  0.00  0.00  0.32  0.43  0.29  0.93  0.00
Crit Moves:  ****                                                     ****
Green Time:  32.3   0.0  76.0   0.0   0.0   0.0   0.0  27.6  59.9  43.7  71.3   0.0
Volume/Cap:  1.73  0.00  0.58  0.00  0.00  0.00  0.00  1.34  0.82  0.75  1.51  0.00
Delay/Veh:  379.5   0.0  13.7   0.0   0.0   0.0   0.0   208  33.5  40.1   256   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh: 379.5   0.0  13.7   0.0   0.0   0.0   0.0   208  33.5  40.1   256   0.0
LOS by Move:    F     A     B     A     A     A     A     F     C     D     F     A
HCM2kAvgQ:     76     0    12     0     0     0     0    43    22    17   128     0
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
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Future+Project PM (Mod)     Sun Feb 12, 2012 20:43:38                      8-3
--------------------------------------------------------------------------------
                        Cesar Chavez East Bike Lane
               Cumulative 2030 Conditions - Modified Project
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #3 Cesar Chavez Street/ Connecticut Street
********************************************************************************
Cycle (sec):          115               Critical Vol./Cap.(X):          1.341
Loss Time (sec):       12               Average Delay (sec/veh):         51.2
Optimal Cycle:        180               Level Of Service:                   D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    19    0    19    86   86     0     0   73    73
Y+R:          4.0  4.0   4.0   5.0  4.0   5.0   5.0  5.0   4.0   4.0  5.0   5.0
Lanes:        0  0  0  0  0    0  0  1! 0  0    0  1  1  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    38    0   384   484 1129     0     0 1337   200
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0    38    0   384   484 1129     0     0 1337   200
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0    0     0    38    0   384   484 1129     0     0 1337   200
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0    38    0   384   484 1129     0     0 1337   200
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0    0     0    38    0   384   484 1129     0     0 1337   200
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.86 1.00  0.86  0.46 0.46  1.00  1.00 0.91  0.91
Lanes:       0.00 0.00  0.00  0.09 0.00  0.91  0.60 1.40  0.00  0.00 1.74  0.26
Final Sat.:     0    0     0   146    0  1480   521 1216     0     0 3019   452
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.26 0.00  0.26  0.93 0.93  0.00  0.00 0.44  0.44
Crit Moves:                   ****                  ****
Green Time:   0.0  0.0   0.0  18.7  0.0  18.7  84.5 84.5   0.0   0.0 84.5  84.5
Volume/Cap:  0.00 0.00  0.00  1.60 0.00  1.60  1.26 1.26  0.00  0.00 0.60  0.60
Delay/Veh:    0.0  0.0   0.0 335.1  0.0 335.1 140.4  140   0.0   0.0  8.4   8.4
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0 335.1  0.0 335.1 140.4  140   0.0   0.0  8.4   8.4
LOS by Move:    A    A     A     F    A     F     F    F     A     A    A     A
HCM2kAvgQ:      0    0     0    36    0    36    54   54     0     0   14    14
********************************************************************************
Note: Queue reported is the number of cars per lane.
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-------------------------------------------------------------------------------
                         Cesar Chavez East Bike Lane
                 Cumulative 2030 Conditions - Modified Project
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #4 Cesar Chavez/ Pennsylvania/ I-280 Ramps
*******************************************************************************
Cycle (sec):          90                Critical Vol./Cap.(X):         1.362
Loss Time (sec):      15                Average Delay (sec/veh):        77.3
Optimal Cycle:       180                Level Of Service:                  E
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Protected        Permitted
Rights:          Include           Ovl             Include          Ignore
Min. Green:    22   22    22    12    0    12    18   41     0     0   18    18
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  1  0  1    1  0  0  0  1    1  0  2  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     272  162   572   138    0   580   462  857     0     0  575   582
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  272  162   572   138    0   580   462  857     0     0  575   582
User Adj:    1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  0.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.00
PHF Volume:   292  174   614   148    0   623   496  920     0     0  617     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  292  174   614   148    0   623   496  920     0     0  617     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:  292  174   614   148    0   623   496  920     0     0  617     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.98  1.25  0.93 1.00  0.78  0.93 0.93  1.00  1.00 0.93  1.00
Lanes:       1.00 1.00  1.00  1.00 0.00  1.00  1.00 2.00  0.00  0.00 2.00  1.00
Final Sat.:  1769 1862  2374  1769    0  1477  1769 3538     0     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17 0.09  0.26  0.08 0.00  0.42  0.28 0.26  0.00  0.00 0.17  0.00
Crit Moves:             ****              ****  ****                  ****
Green Time:  22.0 22.0  22.0  17.0  0.0  35.0  18.0 36.0   0.0   0.0 18.0   0.0
Volume/Cap:  0.68 0.38  1.06  0.44 0.00  1.08  1.40 0.65  0.00  0.00 0.87  0.00
Delay/Veh:   39.0 30.8  87.8  36.5  0.0  90.0 233.2 24.2   0.0   0.0 48.9   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  39.0 30.8  87.8  36.5  0.0  90.0 233.2 24.2   0.0   0.0 48.9   0.0
LOS by Move:    D    C     F     D    A     F     F    C     A     A    D     A
HCM2kAvgQ:      8    4    26     4    0    28    33   12     0     0   12     0
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```